

KARPOV, P.A.

3(5) PHASE I BOOK EXPLOITATION SOV/1827
Vsesoyuzny nauchno-issledovatel'skiy geologorazvedochnyy institut

Geologiya i nefte-gazovyye yugo-vostochnyykh rayonov Russkoy platformy; sbornik statey (Geology and Oil and Gas Bearing Characteristics of the Southeastern Regions of the Russian Platform; Collection of Articles) Leningrad, Gosoptekhnizdat, 1956. 242 p. Kriyuu slip inserted. 1,200 copies printed.

Resp. Ed.: Ye.S. Evstoyev; Eds.: M.S. Burshtayn, M.S. Il'ina, and Ye.A. Shchegolev; Tech. Ed.: A.B. Yashchurzhinskaya; Executive Ed.: M.V. Kulikov.

REMARKS: This book is intended for petroleum exploration geologists, particularly those interested in the Russian platform area.

COVERAGE: These articles, originally read at a meeting of the Scientific and Technical Council of Ministry of the Petroleum Industry (1953), discuss the geologic structure of the south-

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eastern parts of the Russian platform, the planning of exploratory and prospecting work, and special problems in geochemistry. Studies are aimed at realizing the oil and gas potential of the area. Representatives of VNIGI, VNIIGI, the Stalingradnefte-razvedka Trust, Saratovneft', Kazakhneft', and Orenneft' contributed to the work. No references are given.

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Card 4/5

AUTHORS: Veselovskaya, M. M., Karpov, P. A. SOV/20-121-5-35/50

TITLE: The Proterozoic Rocks of the Eastern Slope of the Voronezh Massif (Proterozoyskiye porody vostochnogo sklona Voronezhskogo massiva)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 121, Nr 5, pp. 893-896 (USSR)

ABSTRACT: Proterozoic rocks were found in the vicinity of the massif, viz. in 11 bore holes. They are embedded in a depth of from 145 to 2170 m. Various symptoms indicate that the concerned area formed a peneplain during the sedimentation of the Devonian Deposits. The Eastern slope referred to in the title has been formed at the beginning of the Devonian time. The Pre-Cambrian Rocks descend eastwards, not evenly bedded, however, but in steps. 2 steps are investigated. It may be easily assumed that these steps are accompanied by faults in the foundation. This assumption agrees well with the data obtained from electrical investigations by means of which "elevations" were uncovered in the foundation rock. From the following descriptions of the rock proceeds that intrusions of different

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The Proterozoic Rocks of the Eastern Slope of
the Voronezh Massif

SOV/20-121-5-35/50

ages are concerned. A north-east orientation both of the steps and of the intrusions indicates an affiliation of the latter with the deep faults of the foundation. A description of the rock types from the above mentioned bore holes is given. Figure 3 shows their distribution. Concluding, the age of these rocks is discussed: they date from the Lower Proterozoic time, Taratashskaya Suite (Refs 6,1). It is correlated with the Saksaganskaya series of Ukrainia (Ukraine), the Carelian formations of Carelia (Kareliya) and the Huron (Guron) of America (Biotite-tourmaline- and pyroxene-amphibole slate). The age of the granite gneiss containing tourmaline is hard to determine. They are either Neo-Archeozoic or Proterozoic. All rocks investigated here are doubtless of sedimentary origin. They are radically metamorphosed loamy and partially carbonate rocks amongst which are also intermediary inter-Aleurolite sandstones and slates. Concluding, the tourmaline of that area has been mineralogically described. There are 3 figures and 7 references, 6 of which are Soviet.

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The Proterozoic Rocks of the Eastern Slope of
the Voronezh Massif

SOV/20-121-5-35/50

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut (All-Union Scientific Research Institute
of Geological Petroleum Prospecting)

PRESENTED: March 31, 1958, by N. M. Strakhov, Member, Academy of Sciences,
USSR

SUBMITTED: March 31, 1958

Card 3/3

KARPOV, P. A.: Master Geolog-Mineralog Sci (diss) -- "The devonian deposits of Stalingrad Oblast". Moscow, 1959. 17 pp (Min Geology and Protection of Natural Resources USSR, All-Union Sci Res Geological Prospecting Inst VNIGNI), 150 copies (KL, No 16, 1959, 106)

KARPOV, P.A.

Boundary between the Devonian and Carboniferous in Stalingrad
Province. Trudy VNIIGNI no.14:131-136 '59. (MIRA 12:10)

1. Tsentral'naya nauchno-issledovatel'skaya laboratoriya tresta
Stalingradneftegazrazvedka.

(Stalingrad Province--Geology, Stratigraphic)

KARPOV, P. A.

Middle Devonian and underlying sediments west of the Volga
in Stalingrad Province. Trudy VNIGNI no. 19:66-79 '59. (MIRA 13:12)
(Stalingrad Province--Geology, Stratigraphic)

3(5)

SOV/20-125-4-48/74

AUTHOR: Karpov, P. A.

TITLE: On the Problem of the Age of the Caspian Depression (K voprosu o vozraste Prikaspiyskoy vpadiny)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 4, pp 859-861 (USSR)

ABSTRACT: Several research workers are of the opinion that the Caspian Depression is very old (Ripheic or Eiffelian age) (Refs 1, 4, 7, 9). There are, however, no data available to support these assumptions. The decrease in the thickness of Devonian sediments in the region east of the Volga near Saratov was the motive for Ya. S. Eventova (Ref 2) revision of the mentioned assumption (also Ref 5). Although this is doubted the author gives several proofs in favor of the Devonian age of the mentioned depression. From the comparison of the Permian and Fammenian sediments (Table 1) in the zone of the Don-Medveditskiye dislocations and the sections of the most deeply embedded parts of the Moskovskaya synclisis it becomes obvious that the former mentioned dislocations are more justified to be regarded as a depression than the aforesaid synclisis. Charts showing equally thick sediments (Fig 1) clearly reveal that the Caspian Depression (Prikaspiyskaya vpadina) penetrated

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On the Problem of the Age of the Caspian Depression SOV/20-125-4-43/74

right-angled into the body of the Russian Platform (Russkaya plita). All considerations of the present paper as to the sedimentation of the Caspian Depression concern the Devonian sediments. On the basis of the mentioned data it can be assumed that the Caspian Depression was in the process of formation in any case already in the Upper Devonian and not only in the Lower Permian (Refs 2, 5). This formation was accompanied by breaks of the fundament already in the Devonian. The Caspian Depression was apparently shifted from West to East and North to South. The extent of the depression - a downwarping part of the Russian Platform - decreased in the course of geologic ages. There are 1 figure, 2 tables and 9 Soviet references.

PRESENTED: November 21, 1958, by D. V. Halivkin, Academician

SUBMITTED: November 16, 1958

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3(5)

SOV/20-128-2-38/59

AUTHORS:

Karpov, P. A., Lyashenko, A. I., Nechayeva, M. A.,
Shevchenko, V. I.

TITLE:

Brachiopods of the Ural Type in Devonian Deposits of
Stalingrad Oblast'

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 2, pp 359-361
(USSR)

ABSTRACT:

The Middle and Upper Frasnian deposits of the above region including the Zhirnovskaya area contain a fauna characteristic of the corresponding deposits of the central oblasts. However, a brachiopod fauna very similar to that of the Samsonovskiy, Askynskiy and Barminskiy horizons of the Ural were found on the Linevskoye elevation (15 km eastwards) in the upper half of the Frasnian stage. Furthermore, foraminifers and ostracods were found in the brownish-grey, bituminous fine-grained lime-stones of borehole Nr 30 (between 2337 and 2342 m) and Nr 32 (2276-2281-2286-2295 m). The fauna was classified by A. I. Lyashenko and G. P. Batanova (Ref 1). According to B. P. Markovskiy, it belongs to the Mendymenskaya strata. The latter are, however, of the same age as the Samsonovskiy strata ac-

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Brachiopods of the Ural Type in Devonian Deposits of Stalingrad Oblast' SOV/20-128-2-38/59

According to the unified scheme. According to Lyashenko the latter are younger than the Mendym'skiye ones. Almost all brachiopods found occur in the Samsonov'skiye and in the lower part of the Askyn'skiye strata of the Ural (Refs 3,7). A similarity of the fauna of the upper half of the Frasnian in Linevo and in the Ural proves a far-reaching connection of the waters of the Prikaspiyskaya (Caspian) depression and the Ural. It is assumed that conditions prevailed here and there that favored the existence of similar fauna complexes. An abrupt change of facies apparently occurred in the zone of the foundation fracture, in the section between Linevo and Zhirnovsk. A normal fauna characteristic of the central part of the Russian platform developed at that time. The change of sedimentation conditions was accompanied by a considerable increase of the thickness of the corresponding deposits in the region of Linevo. There are 10 Soviet references.

ASSOCIATION: Tsentral'naya nauchno-issledovatel'skaya laboratoriya
Upravleniya neftyanoy i gazovoy promyshlennosti Stalingradskogo
Card 2/3 Soveta narodnogo khozyaystva (Central Scientific Research

. Brachiopods of the Ural Type in Devonian Deposits of SOV/20-128-2-38/59 Stalingrad Oblast'

Laboratory of the Administration of the Petroleum- and Natural Gas Industry of the Stalingrad Council of National Economy)

PRESENTED: May 8, 1959, by D. V. Nalivkin, Academician.

SUBMITTED: May 5, 1959

Card 3/3

KARPOV, P.A.

Devonian sediments in Stalingrad Province. *Bul.MOIP.Otd.geol.*
34 no.4:159-160 *Jl-Ag '59.* (MIRA 13:8)
(Stalingrad Province--Sediments (Geology))

KARPOV, P.A.

Paleoclimatological problems and identification of Devonian strata in the southeastern part of the Russian Platform. Dokl. AN SSSR 140 no.3:662-665 S '61. (MIRA 14:9)

1. Nauchno-issledovatel'skiy institut neftyanoy i gazovoy promyshlennosti, g. Stalingrad. Predstavleno akademikom N.M. Strakhovym.

(Volograd Province--Geology, Stratigraphic)

KARPOV, P.A.

Paleogeography of the time of formation of Upper Frasnian
porous and cavernous carbonate rocks of Volgograd Province.
Dokl.AN SSSR 149 no.1:158-161 Mr '63. (MIRA 16:2)

1. Nauchno-issledovatel'skiy neftyanoy i gazovoy promyshlen-
nosti, Volgograd. Predstavleno akademikom N.M.Strakhovym.
(Volgograd Province—Rocks, Carbonate)

KARPOV, P.A.; NAZARENKO, A.M.; NECHAYEVA, M.A.; SHEVCHENKO, V.I.

Stratigraphy of Devonian sediments in the Don-Medveditsa
swell and the Tersinskaya Depression. Trudy VNIING no.1:
17-38 '62. (MIRA 16:10)

KARPOV, P.A.; SHEVCHENKO, V.I.; TEBYAKIN, V.V.; NECHAYEVA, M.A.;
NAZARENKO, A.M.

Unconformity in the Upper Frasnian substage in the western
part of Volgograd Province. Geol. nefti i gaza 7 no.12:41-44
D '63. (MIRA 17:8)

KARPOV, P.A.

Some characteristics of the porosity variations of terrigenous rocks depending on the depth of occurrence as revealed by a study of Devonian sediments in Volgograd Province. Lit. i pol. iskop. no. 5:118-121 S-0 '64. (MIRA 17:11)

1. Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i gazovoy promyshlennosti.

KARPOV, P.A.

History of the eastern part of the Voronezh arch in the Devonian.
Izv.vys.ucheb.zav.; geol. i razv. 8 no.2:30-36 F '65.

(MIRA 18:3)

1. Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i
gazovoy promyshlennosti.

SHEVCHENKO, V.I.; KARPOV, P.A.; NECHAYEVA, M.A.; GAZARENKO, A.M.

Upper Famennian sediments in the southeastern part of the Russian Platform. Dokl. AN SSSR 160 no.4:927-930. 1965.

(MIRA 18:2)

1. Nauchno-issledovatel'skiy institut naftyanoy i gazovoy promyshlennosti, Volgograd. Submitted May 21, 1965.

SKLOVSKIY, A.M.; VOLOKH, A.G.; KARPOV, P.A.; KONDRAT'YEVA, M.G.; LYASHENKO, A.I.; FEDOROVA, T.I.; SHEVCHENKO, V.I.

Devonian sediments of the western part of the northern Caspian oil- and gas-bearing basin. [Trudy] NILneftegaza no.10:127-181 '63. (MIRA 18:3)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti; Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut; Nizhnevolzhskiy nauchno-issledovatel'skiy institut geologii i geofiziki i Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i gazovoy promyshlennosti.

KARPOV, P.A.; CHUGUNOV, N.A.

New data on Devonian effusive activity in the eastern slope
of the Voronezh Massif. Dokl. AN SSSR 165 no.4:894-897 D
'65. (MIRA 18:12)

1. Submitted May 13, 1965.

RODIONOVA, E.F.; KORCHAGINA, Yu.I.; KARPOV, P.A.; GORENBEYH, I.A.; PENTINA, T.Ye.

Geochemical characteristics of Upper Devonian sediments in some
areas of Volgograd Province. Trudy VNIGM no.33:72-116 '62.
(MIRA 18:12)

KARPOV, P.F.

Palliative operations in tumors of the pancreas. Sov.med. 24
no.3:11-15 Mr '60. (MIRA 14:3)

1. Zav. khirurgicheskim otdeleniyem bol'nitsy "Sokolinaya gora"
(glavnyy vrach A.M.Pyl'tsova, nauchnyy rukovoditel' - prof.
A.I. Mironov).

(PANCREAS---TUMORS)

U S S R

✓ Casting steel shot. P. T. Bgurov, P. I. Mikhalev, and P. G. Karpov. *Likhn. Proizvodstva* 1954, No. 6, 1-3. ✓ Steel shot for shot blasting and well drilling costs: 0.6-

1.1% C, 0.5-0.8 Mn, 0.2-0.7 Si is made by pouring molten steel through 10-14-mm. nozzles on a steel drum partially immersed in a water tank and rotating at a peripheral speed slightly greater or equal to the falling velocity of an element of steel stream, and carrying on its surface a layer of water 2-3.5 mm. thick. Normal shot formation takes place when the stream falls on a surface inclined to the horizontal not more than 5°, which is provided by a drum 380-420 mm. in diam. The walls of the tank should not be closer than 2.5-3 m. to the drum to prevent sticking of molten drops to them. About 70% of the charge is converted into shot free from porosity and 90% of which lie between 0.8 and 5.0 mm. diam. P. D. G.

AID Nr. 992-7 18 June

KARPOV, P. G.

AN APPROXIMATE DIFFERENTIATION OF PFM INFORMATION (USSR)

Karpov, P. G. Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye,
v. 6, no. 2, 1963, 30-36. S/146/63/006/002/004/010

A method is described, developed by the Ryazan' Radiotechnical Institute, for the approximate differentiation of continuous PFM information. It is shown that the accuracy of differentiation will be higher the greater the difference between $\Delta\tau$ and T_x (i. e., $\Delta\tau \ll T_x$), where T_x is the period of the initial pulse sequence (N_1) and $\Delta\tau$ is a small, fixed time increment during which the change in the sequence occurs. In the method described the operation of the approximate differentiation leads to the development of a new pulse sequence N equal to the difference between pulse sequence N_1 , which models a change in the physical quantity $X_1(t)$, and N_1' , which is delayed for a finite period ($\Delta\tau$) by pulse sequence N_1 . In the device using this method the differentiated pulse sequence N_1 is applied to the delay block, where the new pulse sequence N_1' is formed. This new sequence is applied to the following block simultaneously with the initial information (N_1). The primary function of this block is to exclude those pulses from sequences N_1 and N_1' which coincide in time. The output of this block provides a new pulse sequence which

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AID Nr. 992-7 18 June

AN APPROXIMATE DIFFERENTIATION [Cont'd].:

S/146/63/006/002/004/010

appears at the output stage, consisting of two triodes. If N_1 is greater than N_1^i , a sequence with positive polarity appears at the output of one triode, but if N_1 is less than N_1^i , it appears at the other triode with negative polarity. When N_1 equals N_1^i there will be no pulses. The new continuous sequence obtained (N) is linked with the initial information $N_1(t)$ by the relationship $N = k(dN_1/dt)$. [GS]

Card 2/2

KARPOV, P.I., inzhener.

Cut faces economically. Gidroliz.1 lesokhim.prom. 9 no.6:23 '56.
(MIRA 9:10)

1.Zagaynevskiy khimleskhez.
(Tree tapping)

KARPOV, P. L.

PA 196T2

USSR/Biology - Genetics Breeding of Sheep

Nov 51

"Effect of Changed Conditions of Embryogenesis on the Growth and Development of Lambs, "A. I. Lopyrin, Cand Agr Sci, N. V. Loginova, Cand Biol Sci, P. L. Karpov, All-Union Sci Res Inst of Sheep and Goat Breeding

"Sov Zootekh" Vol VI, No 11, pp 83-95

Describes expts on transplanting 24-hr-old sheep fetuses into sheep of a different strain. Results varied with the strains involved, but heightened vitality of the lambs was generally achieved together with some modifications of the character of the wool covering in particular cases. Transplantations of sheep fetuses into goats were unsuccessful. Reviews some USSR work on vegetative hybridization of animals. Mentions Nikulina's finding in expts on rabbits to the effect that the stock is improved when the males receive alk nutritional components while the females are fed acidic components.

PA 196T2

KARPov P. L.

USSR/Cultivated Plants. Fodder Plants.

M

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68235

Author : Dudar', A., Karpov, P.

Inst : Stavropol' Institute of Sheep Husbandry.

Title : Winter Vetch, a Valuable Fodder Crop.

Orig Pub : Peredov. opyt. s.-kh. proiz-va Stavropolya,
1957, iyul-avg., 16-18

Abstract : Experiments conducted over the years of
1955-1957, on farms of the Stavropol' Insti-
tute of Sheep Husbandry (zone of fluctuating
precipitation, Stavropol' Kray), demonstra-
ted that on sowings of mixed winter barley
and woolly-pod vetch, average yields of green
mass were 176.3 centners/hectare. In the
drought zone, vetch mixed with winter wheat

Card : 1/2

USSR / General Biology. Individual Development.
Transplantation and Symphysis.

B

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 14402

Author : Lopyrin, A. I.; Loginova, N. V.; Karpov, P. L.
Inst ; Not given
Title ; The Acclimatization and Development of
Embryos in Ewes After Homoplastic Trans-
plantation

Orig Pub : Vestn. s.-kh. nauki, 1957, No 1, 53-62

Abstract : In ewes the oviduct was removed 1-2 days
after fertilization of the ovum and zygotes
were introduced into the oviduct of
recipients of another breed. Twenty-nine
transplanted zygotes took root. Only 3 lambs
were found to be able to survive. The ex-
perimental lambs developed more intensively

Card 1/2

USSR / General Biology. Individual Development.
Transplantation and Symphysis.

B

~~APPROVED FOR RELEASE: 06/13/2000~~ ~~is.~~ CIA-RDP86-00513R000720830009-

Abs Jour : Ref Zhur - Biologiya, No 4, 1959, No. 14402

than controls and they possessed normal
reproductive function ability. In their
appearance the lambs could not be dis-
tinguished from monogenetic control lambs.
When ewes which were raised from experimental
animals were interbred, lambs of an unusual
appearance were bred. When interbreed trans-
plantations of zygotes were repeated the
authors did not succeed in determining the
effect of the recipient mother upon the
development of the embryo except for the fact
that experimental lambs developed better. --
L. D. Liozner

Card 2/2

KARPOV, P. I.

What the Institute of Sheep Breeding is doing towards the improvement of wool. Nauka i pered.op. v sel'khoz. 7 no.3:60-62 '57. (MLBA 10:9)

1. Direktor Vsesoyuznogo nauchno-issledovatel'skogo instituta
ovtsevodstva i kozovodstva.
(Wool) (Sheep breeding)

USSR/Farm Animals - Small Horned Stock

Q

Abs Jour : Ref Zhur - Biol., No 15, 1958, 69336

Author : Karpov, P.L., Khadanovich, I.V.

Inst : -

Title : Valuable Feed for Fine-Wool Sheep

Orig Pub : Kukuruz, 1958, No 1, 60-62

Abstract : No abstract.

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KARPOV, P.I., kand.sel'skokhoz.nauk, red.; LOBKOV, M.Ya., red.;
STEHLIYANKO, T.V., tekhn.red.

[Fine-wool sheep breeding] Tonkorunnoe ovtsevodstvo. Stavro-
pol', Stavropol'skoe knizhnoe izd-vo, 1960. 299 p. (MIRA 14:1)
(Sheep)

KARPOV, P.M.; ISLAMOV, A.I., kand. geol.-min. nauk, otv. red.;
MURATDINOVA, M.R., red.

[Subsidence phenomena in the virgin lands of the Golodnaya
Steppe] Prosadochnye iavleniia na tselinnykh zemliakh
Golodnoi stepi. Tashkent, Izd-vo "Nauka" Uzbekskoi SSR,
1964. 188 p. (MIRA 17:6)

KARPOV, P.M.

Some data on the sediments in the Akcha-Darya (ancient channel of
the Amu-Darya). Zap. Uz. otd. Vses. min. ob-va no.11:109-113 '57.
(Amu-Darya Valley--Geology, Stratigraphic) (MIRA 11:6)

KARPOV, P.M.

Forecasting the settling of soils in the construction zone of
the South Golodnaya-Steppe Canal. Mat. po proizv. sil.
Uzb. no.15:72-79 '60. (MIRA 14:8)

1. Institut geologii AN UzSSR.
(South Golodnaya-Steppe Canal region--Soil mechanics)

KARPOV, P. M. _____

Approximate calculation of metal charge mixtures by graphic
and analytical methods. Lit. proizv. no.10:39 0 '62.
(MIRA 15:10)

(Founding—Tables, calculations, etc.)

KARPOV, P.M.; BIDULYA, P.N.

Investigating the loss of design elements in the components of a
cupola charge. Lit. proizv. no.8:24-26 Ag '62. (MIRA 15:11)
(Cupola furnaces)

KARPOV, P.M.; BIDULYA, P.N.

Oxidation of cupola charge components during preheating.

Lit. proizv. no.1:14-15 Ja '65.

(MBA 18:3)

KARPOV, P. P.
LA

22

How can the latent reserves of the 2-furnace cracking system be utilized? P. P. Karpov. *Neftyanaya Prom* 22, No. 4, 101-2(1941); *Chem. Zvesti* 1943, 1, 334. The suggestion of Togoiev (C. A. 35, 7104) to intensify the 2-furnace cracking system is dismissed as wrong. K. can be charged by 1.5 million kg. cal. hr. and that the furnace for the severe cracking is overcharged by the same amt., as compared with the plan. The balance can be restored by switching the heat exchangers for the furnaces, improving thereby the efficiency of the system by 10-15% without using addnl. equipment.

A. K. Kister

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

KARFOV, P. P.

Detonating agents. Moskva, Gos. izd-vo oboronnoi promyshl., 1945.

KARPOV, P. P.

Petroleum Engineering

"Petroleum Refining (for trade schools)", Gostoptekhnizdat, 1948

Summary No. 60, 26 May 52; BR-52056899

KARPOV, P. P.

-8-

Pererabotka nefti (Processing petroleum) 2 izd. perer. i dopol. Moskva, Gostoptekhnizdat, 1953.

352 p. illus., diagrs., tables.

"Literatura": p. (346)

N/5
735.6
.K1
1953

GREBTSOV, G.I., red.; KARPOV, P.P., red.; KALMYK, V.A., red.; KHOLIN,
I.A., red.; PONOMAREVA, A.A., tekhn.red.

[Material balances in the national economic plan] Material'nye
balansy v narodnokhoziaistvennom plane. Moskva, Gosplanizdat,
1960. 248 p. (MIRA 13:8)
(Russia--Economic policy)

IVANOV, N.V.; MALYUTIN, N.K.; FLEYSHMAN, A.L.; KARPOV, P.P., inzh.,
retsenzent; SAUTIN, I.A., ekonomist, retsenzent; SHUBNIKOV, A.K.,
prof., doktor tekhn.nauk, red.; TKOCHUN, A.I., red.izd-va;
UVAROVA, A.F., tekhn.red.

[Supplying industries of regional economic councils with materials
and equipment] Material'no-tekhnicheskoe snabzhenie promyshlen-
nosti sovmarkhozov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.
lit-ry, 1961. 307 p. (MIRA 14:6)
(Industrial procurement)

29333

S/119/61/000/010/005/008

D209/D303

26. 7/90

AUTHOR: Karpov, P.S., Engineer

TITLE: Compact electrical bellows type differential manometer ДСЭЭ
- М (ДСЭЭ - М)

PERIODICAL: Priborostroyeniye, no. 10, 1961, 28

TEXT: This instrument is designed for the measurement and control, by the variable drop method, of liquid, gas and vapor flow, pressure difference, pressure, thrust and liquid level. Its operation is based on the balancing of the force (due to pressure drop acting upon a sensing element) by the force of elastic deformation of two bellows filled with the fluid and the force of cylindrical range-spring. The lowest range is 0 - 40 mm and the highest 0 - 1000 mm of mercury. Static pressure - 320 Kg / cm². The electrical transducer is energized by a secondary electronic instrument, whose connecting leads' resistance and capacitance must not exceed 5 Ω and 0.01 μF respectively. There is 1 figure.

Card 1/1

KARPOV, P.S.

New instruments approved for serial production. Priborostroenie
no.10:28-29 0 '61. (MIRA 14:9)
(Instruments)

KANDYMOV, Atagel'dy; KARPOV, P.Ya., red.

[Eyes of the time] Glaza vremeni. Ashkhabad, Turkmenia-
izdat, 1965. 16 p. (MIRA 18:10)

KARPOV, R.

Indirect hemagglutination reaction as a method for determining
the formation of antibodies to listerella. Trudy TomNIIVS 11:
228-231 '60. (MIRA 16:2)

1. Nauchnyy studencheskiy kruzhek pro kafedre mikrobiologii
Tomskogo meditsinskogo instituta.
(LISTERELLA) (ANTIGENS AND ANTIBODIES) (BLOOD--AGGLUTINATION)

9(3)

SOV/146-58-4-5/22

AUTHOR: Karpov, R.G. Docent

TITLE: An Instrument for Measuring Small Phase Shifts at Increased Frequencies

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, 1958, Nr 4, pp 26-33 (USSR)

ABSTRACT: The accuracy of phase shift measurements with conventional methods rarely exceeds 1-2 degrees. In the majority of practical applications in radio engineering such an accuracy is fully adequate. However, in a number of cases this accuracy is insufficient. For example, when tuning operational amplifiers with negative feedback it is necessary to know the phase shift angle between the input and back voltages, whose permissible value is usually of the order of some 10 minutes with an accuracy of 5' - 10'. Analogous tasks may be found when testing and adjusting various types of automatic devices for example, devices for control of different production processes, etc. In modern specialized literature, there are some refer-

Card 1/5

SOV/146-58-4-5/22

An Instrument for Measuring Small Phase Shifts at Increased Frequencies

ences to methods of increased sensitivity and accuracy of phase shift measurements. However, there are no industrial-type devices for measuring the phase difference with a sensitivity up to several minutes at increased frequencies. In this paper, the author explains a device and a method for measuring small phase shifts of the order of 10-15 degrees with a reading accuracy of 5-10 minutes. With this device, small phase shifts are measured by comparing the time interval t_{φ} , which is to be determined by the phase difference to be measured, with a precisely known duration of the circular sweep, shaped by means of RC circuit from a sine voltage of a reference oscillator. Figure 1 shows the block diagram of this device. The voltage from the input of the amplifier to be tested U_{BX} and the voltage from its outlet $U_{B/CX}$ are shifted in phase by some angle which is to be measured. The angle φ may have a magnitude of the order of some degree (with pair number of simplifier stages) or some-

Card 2/5

SOV/146-58-4-5/22

An Instrument for Measuring Small Phase Shifts at Increased Frequencies

what more or less than 180 degrees (with odd number of amplifier stages). The voltages U_{BX} and $U_{B\phi CX}$ are fed thru the coupling cathode followers to 2 identical shaping circuits, each of which consists of 2 amplifier stages and a device shaping narrow pulses, built according to the regenerative amplitude comparator circuit. The principle circuit diagram of a regenerative comparator is shown in Figure 2. The voltage U_{BX} (or $U_{B\phi CX}$) amplified by a pre-amplifier (amplitude not less than 20-25 v) is fed to the input of the comparator which is composed of one 6N8 tube in diode connection and one 6Sh4 in pentode connection. Two sequences of sufficiently short pulses are obtained, shifted in phase in regard to each other by the same angle φ which is the same as that of the sine voltage U_{BX} and $U_{B\phi CX}$ taken from the input and the output of the amplifier to be tuned. These pulse sequences are fed thru a diode limiter, which cuts the positive pulses, to the grid of a summing tube 6N9 with a common anode load.

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SOV/146-58-4-5/22

An Instrument for Measuring Small Phase Shifts at Increased Frequencies

The resistor SP-1-2E is used as an anode load. From its slide the pulses are fed thru a separation capacitance to the central electrode of the 8L030 tube. Sine voltages, shifted in phase by 90 degrees, are fed to the deflecting plates of the tubes from the audio frequency reference generator for performing the circular scanning with a duration equal to the cycle of the sine voltage, fed from the audio frequency reference generator. The voltages shifted in phase by 90 degrees are obtained by means of a simple RC circuits consisting of the capacitor C and 2 series connected variable resistors. Feeding simultaneously the shaped pulses and the voltage from the reference oscillator to the screen of the oscillograph will produce an image as shown in Figure 3. The author describes in detail the measuring method using the aforementioned device. He considers the limits of increasing the reading accuracy and the measurement errors observed with this method. If an oscillograph with a tube having a central elec-

Card 4/5

KARPOV, R.G.

Electronic instrument for measuring the pressure of engine ignition.
Izv. vys. ucheb. zav.; prib. no.2:34-40 '59. (MIRA 13:2)

1. Ryazanskiy radiotekhnicheskiy institut. Rekomendovana kafedrami
teoreticheskoy radiotekhniki i radioelektroizmereniya.
(Gas and oil engines--Ignition--Measurement)
(Electronic instruments)

SOV/115-59-3-9/33

28(2)

AUTHOR: Karpov, R.G.

TITLE: Measuring Pressures of Type $P = P_0 + p(t)$ at $p(t) \ll P_0$

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 6, pp 21-25 (USSR)

ABSTRACT: The author describes a device and a method for measuring pressures with a small ratio of the pulsation amplitude in respect to the constant component. Presently, the problem of measuring rapidly changing pressures may be solved by means of any of the numerous pick-ups used for measuring purposes (inductance, piezo-electric, capacitance, carbon and other pick-ups). When measuring pressures in which the constant component is commensurable with the pulsation amplitude, these pick-ups will provide a sufficiently high accuracy. However, none of them is suitable for measuring pulsating pressures with small ratios of the pulsation amplitude in respect to the constant component of the pressure to be measured, i.e., pressures which are described by the equation $P = P_0 + p(t)$ at $p(t) \ll P_0$. Such problems are frequently found in combustion engine building when investigating the influence of pulsating pressures in tubes feeding fuel to nozzles, when measuring the

Card 1/3

SOV/115-59-6-9/33

Measuring Pressures of Type $P = P_0 + p(t)$ at $p(t) \ll P_0$

influence of pressure pulsations behind the booster in aircraft engines on the quality of carburation, when measuring pressure pulsations in gas turbine engines, etc. The application of conventional pressure measuring methods is connected with a number of difficulties in these cases. In the equipment described by the author for measuring pressures with small ratios of the pulsation amplitude in respect to the constant component, either a capacitance pick-up with constant counter-pressure, or a capacitance pick-up with reduced pressure, may be used. The pick-up with constant counter-pressure is shown in fig.1. The measuring arrangement with this pick-up is shown in fig.2. For measuring the aforementioned pressures with a variable constant component, the pick-up with reduced pressure, shown in fig.3, proved to be more suitable. The capacitance pick-up is connected by means of a 12 m long, two-screen, RK-49, coaxial cable to one of the bridge arms of the measuring instrument, as shown in fig.4. This method of connecting the pick-up and the cable excludes the influence of the cable self-capacitance on the sensitivity of the system. The bridge circuit receives high frequency voltage from a Hartley

Card 2/3

S9V/115-59-6-9/33

Measuring Pressures of Type $P = P_0 + p(t)$ at $p(t) \ll P_0$

oscillator ($f = 1.2$ mc) composed of one tube 6P6. The high-frequency amplifier is equipped with tubes 6Zh4. A modified cathode ray oscillograph EO-7, equipped with a photographic attachment, was used for recording the pressure curves. The author describes in detail the measuring method and the determination of the natural frequency of the pick-up. The sensitivity of the pick-up and its self-oscillation frequency may change with temperature variations of the surrounding medium which should be taken into consideration. There are 2 diagrams, 2 block diagrams and 1 circuit diagram.

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9(6) 28(5)

S/146/59/002/06/006/016
D002/D006

AUTHOR: Karpov, R.G., Docent

TITLE: Measuring the Mean Indicator Pressure of Internal
Combustion Engines γ5

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Proborostroy-
eniye, 1959, Nr 6, pp 38-40 (USSR)

ABSTRACT: The working of internal combustion engines is analyzed,
and an instrument (Figure 4) measuring the mean indi-
cator pressure during the operation of such engines
by means of a direct-reading dial indicator is dis-
cussed. The instrument's simple computer is built
on two "6N9" triodes. The graduation curve (Figure
6) of the device is given, and the results obtained
by means of the new device and the Shelest indicator
(Figure 7) are compared. Close agreement is obtained
which shows that the new device is adequately accurate.

Card 1/2

S/146/59/002/06/006/016
D002/D006

Measuring the Mean Indicator Pressure of Internal Combustion Engines

Pressure determination can be carried out in a relatively short time, therefore the device can simplify the checking work in engine plants. The article was recommended by the Kafedra teoreticheskikh osnov radiotekhniki i radioelektroizmereniya (Chair of the Theoretical Bases of Radio Engineering and Radio-Electro-Measurements). There are 5 graphs, 2 diagrams, and 4 Soviet references.

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut (Ryazan'
Institute of Radio Engineering)

SUBMITTED: February 13, 1959

Card 2/2



69078

S/120/60/000/01/013/051
E192/E382

9.6000

AUTHOR: Karpov, R.G.

TITLE: Measurement of Small Phase Differences Between Two Sinusoidal Signals

PERIODICAL: Pribyr i tekhnika eksperimenta, 1960, Nr 1,
pp 57 - 58 (USSR)

ABSTRACT: It is necessary to measure the phase φ between two voltages U_1 and U_2 . The voltages are first applied to two buffer cathode followers and then to shaping circuits which form short pulses corresponding to the instant of the zero crossings of the sinusoids. Two trains of pulses shifted in time by an interval $t_\varphi = \varphi T / 360^\circ$ are thus obtained; T is the period of the investigated waveform. The pulse trains are applied to an adding circuit and then to the control grid of a cathode-ray tube. Sinusoidal voltages shifted in phase by 90° are applied to the deflection plates of the tube. The waveform obtained on the screen of the tube is in the form of the circle shown in Figure 3a. If the generator frequency is now gradually increased, the

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E192/E382

Measurement of Small Phase Differences Between Two Sinusoidal Signals

position of the bright markers on the time base will change and when the length of the circular time base is equal to t_{φ} , the markers will coincide (Figure 3).

The measured angle can be evaluated from the formula:

$$\varphi = T_0 \times 360^\circ / T$$

where T_0 is the period of the signal generator frequency, which is used to produce the circular time base. If the error in determining the coincidence of the markers is 1 to 2°, the error in determining φ is reduced $360^\circ / \varphi$ times. This accuracy can further be increased by increasing the generator frequency by an integral number of times. The greatest error in the measurement by the above method is due to the phase shifts in the pulse-forming circuits but this can be almost fully eliminated by carrying out two measurements. This is done by changing over the two forming circuits

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69078

S/120/60/000/01/015/051

Measurement of Small Phase Differences Between Two Sinusoidal
Signals

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and determining the phase for each case. There are
3 figures and 4 Soviet references.

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut
(Ryazan' Radio-engineering Institute)

SUBMITTED: December 13, 1958

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Card 3/3

80902

S/120/60/000/02/033/052

EC32/E314

24,2400

AUTHOR: Karpov, R.G.

TITLE: Measurement of Small and Rapidly Varying Capacitances

PERIODICAL: Pribery i tekhnika eksperimenta, 1960, No. 2,
pp 124 - 126 (USSR)

ABSTRACT: The principle of the bridge is illustrated in Figs 1 and 2. The measured capacitance is included in one of the arms of the bridge formed by the two inductances L_3 and L_4 , the probe capacitance C_x and the variable capacitor C_{KQ-H} , which is used in the preliminary balancing of the bridge and the choice of the working point. The capacitive probe is connected to the bridge by the doubly-screened cable, whose length must be chosen in accordance with the conditions of the experiment. The cable capacitance between the central wire and the first screen, which tends to reduce the sensitivity in ordinary circuits, is thus connected in parallel with L_4 . In order to neutralize the effect of this capacitance, the adjacent arm L_3 is also shunted by a capacitance C_k , whose value is suitable chosen in a preliminary experiment and is approximately equal to C_k , i.e. the cable capacitance. Owing to this method

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EO32/E314

Measurement of Small and Rapidly Varying Capacitances

of connection, the length of the cable and its capacitance has practically no effect on the sensitivity of the circuit since the cable capacity can always be neutralized by including a suitable value of C_k in the adjacent arm of the bridge. The bridge is supplied by a high-frequency source, which is applied between the points a and b (Figure 1) through the stepdown transformer T_{p1}

($n = 10:1$). The latter is fed by a 1.2 Mc/s oscillator. The oscillator supplying the measuring bridge is based on the 6NC tube (∇_1), forming a Hartley oscillator and including the primary of the transformer T_{p2} in its anode circuit. Since the coils L_3 and L_4 are connected in opposition, when the bridge is fully balanced, the high-frequency voltage induced in L_5 , which is the secondary coil of the stepup transformer T_{p2} ($n = 1:10$), will be zero since in a balanced bridge the voltages across L_3 and L_4 are equal in magnitude and opposite in direction. If the probe capacitance C_x is altered, the balance is

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E032/E314

Measurement of Small and Rapidly Varying Capacitances

upset and the voltages across L_3 and L_4 are different. Consequently, a high-frequency voltage appears across L_5 and the amplitude of this voltage is proportional to the change in the capacitance of the probe. In order to increase the sensitivity of the bridge, L_5 is shunted by a capacitance C_1 (Figure 2), whose magnitude is chosen so that the oscillatory circuit $L_5 C_1$ is tuned to the high-frequency voltage feeding the bridge. In this way the oscillatory circuit $L_5 C_1$ is used to obtain a high-frequency voltage which is amplitude-modulated in accordance with the time variation in the probe capacitance $\Delta C_x = f(t)$. This signal is then amplified by the two-stage high-frequency amplifier (Π_2 and Π_3) and is detected by Π_4 . The output can be exhibited either on the CRO screen or can be recorded with a pointer instrument. The circuit has been used with a capacitive probe having the following parameters: initial capacitance 10 μF ; maximum change in capacitance within the linear part of the characteristic 1.5 μF ; maximum length of cable 12 - 15 m (without loss of sensitivity). There are 2 figures and 4 Soviet references.

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut (Ryazan Radio-Engineering Institute)

SUBMITTED: February 9, 1959

Card 3/3

KARPOV, R.G.

Measuring true horse power of internal combustion engines. Izv.
vys.ucheb.zav.; prib. 4 no.3:24-33 '61. (MIRA 14:6)

1. Ryazanskiy radiotekhnicheskiy institut. Rekomendovana
kafedroy radioelektroizmereniy.
(Electronic instruments)

S/146/61/004/004/002/015
D209/D306

AUTHOR: Karpov, R.G.

TITLE: An apparatus for measuring the effective power of internal combustion engines

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 4, 1961, 7 - 17

TEXT: The paper describes the construction and operation of an apparatus for measuring the effective power of internal combustion engines. This method is claimed to be superior to the usual ones (mechanical, hydraulic, electrical), also to the method described by A.M. Turichin utilizing inductive transmitters (Ref. 2: Elektricheskiye izmereniya neelektricheskikh velichin (Electrical Measurements of Non-Electrical Quantities) Gosenergoizdat, 1959), and to the method utilizing photoelectric transmitters. To solve the problem with the aid of modern electronics one must obtain the following two voltages

$$U_1 = \kappa_1 M_t, \quad U_2 = \kappa_2 n$$

(2)

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S/140/61/004/004/002/015
D209/D306

An apparatus for measuring the ...

(M_t - engine torque in Kgm; n - shaft revolutions in r.p.m.) and to obtain their product by means of a multiplying electronic circuit as a new voltage U which can be measured by a single meter calibrated in H.P. On an elastic shaft coupled with the transmission link between the engine and the load two sprocket wheels are mounted at a distance l_0 from each other. Opposite each of them two induction pulse transmitters are fixed, each consisting of a magnet and a coil. The rotation of the sprocket wheels induces short voltage pulses in the coils with the frequency $f = ni/60$, where i the number of teeth. In this way, two sequences of pulses are obtained, their phase difference being proportional to the angle of torsion of the elastic shaft between the sprocket wheels. The pulses are transmitted through two identical channels (described) in order to obtain the voltages U_1 and U_2 . The product of the voltages is obtained by means of an electronic multiplier of a time-pulse type. This article was recommended by the Kafedra radioelektroizmereniya (Department of Radio Electrical Measurements). There are 4 figures and 3 Soviet-bloc references.

Card 2/3

S/115/62/000/003/007/010
E192/E382

AUTHOR: Karpov, R.G.

TITLE: An electronic maximum gauge

PERIODICAL: Izmeritel'naya tekhnika, no. 3, 1962, 22 - 24

TEXT: One of the important parameters characterizing the operation of an internal combustion engine is the maximum detonation pressure P_z . The instruments employed for the measurement of P_z are usually of the electromechanical or electropneumatic type and these are generally unsatisfactory. A device based on a capacitive transducer was therefore designed. The transducer converts the pressure changes in the cylinder of the combustion engine into proportional capacity changes $\Delta C = kP(t)$. The capacity change is fed into an electronic circuit whose output voltage $U = k_I \Delta C = k_O P(t)$ is proportional to the capacitance changes and thus the pressure changes. The electronic unit is followed by an indicator - meter which permits measurement of $P_{\max}(t) = P_z$. The

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An electronic maximum gauge

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E192/E382

capacitive transducer is water-cooled (see Fig. 1) and consists of a cylindrical body whose walls contain two apertures 2 for admitting the cooling water. The diaphragm 3 of the transducer, which forms the capacitive pick-up is an integral part of the body. The water is prevented from entering the cylinder of the engine by the plate 11 made of thin steel. The fixed plate 6 of the pick-up is attached to the body by means of the nut 7 and insulating bushings 9 and 10. The initial capacitance of the transducer is $C_0 = 15 \text{ pF}$ and this is adjusted by suitably choosing the thickness of the washer rings 8 which control the distance between the diaphragm 3 and the fixed plate 6. If the capacitance changes amount to 8-12% of C_0 the transducer operates linearly. The capacitance of the transducer is connected into one of the arms of an AC bridge by means of a double-screened cable. The bridge is supplied with a high frequency voltage (1.2 Mc/s) from an oscillator and forms an input circuit of a two-stage high-frequency amplifier. The unbalance voltage in the bridge is proportional to the

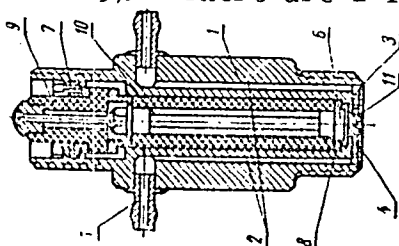
Card 2/3

An electronic maximum gauge

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E192/E382

capacitance change ΔC . The voltage produced in the detector for following the amplifier stage is also proportional to ΔC and thus proportional to the instantaneous value of pressure in the cylinder of the investigated engine. The maximum pressure in the cylinder thus corresponds to the maximum value of the output voltage of the detector. The output signal of the detector is applied to a circuit which detects the maximum pressure. This is based on a rapid charging of a condenser through a diode. The above instrument was compared with a Shelest indicator and it was found that the discrepancies between the two devices did not exceed 3%. There are 2 figures.

Fig. 1:



Card 3/3

KARPOV, R.G.

Instrument for measuring the efficiency of internal combustion engines. Izv.vys.ucheb.zav.;prib. 4 no.4:7-17 '61. (MIRA 14:9)

1. Ryazanskiy radiotekhnicheskiy institut, Rekomendovana kafedroy radioelektroizmereniya.

(Gas and oil engines--Testing)

KARPOV, R.G.

Electronic instrument for measuring maximum pressure of the
ignition. Izm.tekh. no.3:22-24 Mr '62. (MIRA 15:2)
(Electronic instruments)

39338
S/146/62/005/004/007/013
D295/D308

9.7150

AUTHOR:

Karpov, R.G.

TITLE:

Pulse-frequency integrator of variable-sign information loaded by a d.c. voltage

PERIODICAL:

Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 4, 1962, 40-46

TEXT:

The integration of information loaded in the form of a d.c. voltage is usually accomplished by some version of the d.c. amplifier with a capacitive feedback loop. The integration time in such circuits cannot exceed the product of the time constant times the dynamical range, which amount at most to a few tens of minutes, whereas in many problems a much longer integration time arises. The suggestion here is to convert, by using follow-up system techniques, the d.c. voltage into a frequency-modulated sinusoidal voltage, the instantaneous frequency of which is a linear function of the input voltage. The output beats with a reference oscillator and the difference-frequency signal drives a multivibrator.

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S/146/62/005/004/007/013
D295/D308

Pulse-frequency integrator ...

for the output pulses of which have a repetition frequency proportional to the modulus of the d.c. voltage and can be counted over any length of time. The design of such circuit is described in great detail and it is shown to be capable of great accuracy. A suitable sign-sensitive device is added to control a reversible counter, when the information to be integrated is of variable sign. There are 3 figures.

ASSOCIATION:

Ryazanskiy radiotekhnicheskiy institut (Ryazan Radio-Engineering Institute)

SUBMITTED:

November 10, 1961

Card 2/2

KARPOV, R.G.

Frequency-pulse integrator of alternating information given by
d.c. voltage. Izv.vys.ucheb.zav.; prib. 5 no.4:40-46 '62.
(MIRA 15:9)

1. Ryazanskiy radiotekhnicheskiy institut. Rekomendovana kafedroy
teoreticheskikh osnov radiotekhniki.
(Electronic analog computers)

KARPOV, R.G., kand.tekhn.nauk

Diode transformer circuits for the summation and subtraction
of frequency-pulse information in a pulsed form. Avtom.i prib.
no.4:31-35 O-D '62. (MIRA 16:1)

1. Ryazanskiy radiotekhnicheskiy institut.
(Electronic data processing)

PHASE I BOOK EXPLOITATION

SOV/6578

Karpov, Rimma Grigor'yevich

Elektronika v ispytaniі teplovykh dvigateley (Electronics in the Testing of Heat Engines) Moscow, Mashgiz, 1963. 166 p. 5000 copies printed.

Reviewer: D. N. Gerasimov, Engineer; Ed.: A. I. Kuz'minov, Engineer; Ed. of Publishing House: N. M. Paleyev; Tech. Ed.: N. F. Demkina; Managing Ed. for Literature on Heat Energy, Metallurgy, Highway Construction, and Construction of Hoisting and Transporting Machinery: N. M. Zyuzin.

PURPOSE: This book is intended for engineering personnel in the aviation, automobile, and tractor industries.

COVERAGE: Principles of the function and circuit design of electronic measuring devices used for investigating internal combustion engines are presented. The book reviews electronic circuits for

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2-

Electronics in the (Cont.)

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obtaining an indicator diagram and its calibration and for measuring basic engine parameters (indicated pressure, maximum cycle pressure, torque, and indicated and actual power). Principles of circuit design for the measurement of slowly changing values are discussed briefly. There are 34 references, all Soviet.

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Ch. I. General Information

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Card 2/A

KARPOV, R.G., kand. tekhn. nauk

Algebraic operations with frequency-pulsed information. Avtom.
i prib. no.4:43-47 O-D '63. (MIRA 16:12)

1. Ryazanskiy radiotekhnicheskiy institut.

KARPOV, R. G.

Approximate differentiation of the "frequency-pulse information." Izv. vys. ucheb. zav.; prib. 6 no.2:30-36 '63.
(MIRA 16:4)

1. Ryazanskiy radiotekhnicheskiy institut. Rekomendovana kafedroy teoreticheskikh osnov radiotekhniki.

(Electronic analog computers)

KARPOV, R.G.

Analog-to-digital summator of frequency-pulse signals.
Izv. vys. ucheb. zav.; prib. 7 no.1:69-77 '64.

(MIRA 17:9)

1. Ryazanskiy radiotekhnicheskiy institut. Rekomendovana
kafedroy sistem upravleniya.

ACCESSION NR: AP4018997

S/0146/64/007/001/0069/0077

AUTHOR: Karpov, R. G.

TITLE: Analog-digital adder of pulse-frequency signals

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 1, 1964, 69-77

TOPIC TAGS: adder, analog digital adder, AND gate, OR gate, pulse frequency signal, Schmidt trigger, trigger

ABSTRACT: A new analog-digital adder (see Enclosure 1) is described in which continuous pulse sequences $N_1(t)$ and $N_2(t)$ that simulate in the pulse-frequency form the physical quantities $x_1(t)$ and $x_2(t)$ are applied to the inputs of two diode-resistor AND-gates 4 and 5. The gates are controlled by square pulses taken from a trigger 2, see diagrams b and c. Thus, the AND-gates will alternately feed their pulses to the OR-gate 6, and the total number of pulses per unit time will be given by $N'(t) = \frac{N_1(t) + N_2(t)}{2}$. Gates B_1 to B_{k-1} are connected digit-by-digit

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ACCESSION NR: AP4018997

to the counter 9; k is the number of digits which receive the time-delayed pulses from a blocking oscillator 3. As a result, the output of the counter will represent the sum of the source pulse-frequency signals $N_1(t)$ and $N_2(t)$ in the form of a parallel binary code; the discrete time moments will be determined by a clock 1. A modification of the above block diagram which permits the addition of two sequences with arbitrary weight coefficients is also considered, as are the sources of possible errors in such schemes. Orig. art. has: 3 figures and 15 formulas.

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut (Ryazan' Radiotechnical Institute)

SUBMITTED: 12Feb63

DATE ACQ: 23Mar64

ENCL: 01

SUB CODE: IE

NO REF SOV: 007

OTHER: 000

Card 2/3 2

ACCESSION NR: AP4036520

S/0103/64/025/005/0737/0740

AUTHOR: Karpov, R. G. (Ryazan')

TITLE: Arithmetical operations with pulse-frequency information

SOURCE: Avtomatika i telemekhanika, v. 25, no. 5, 1964, 737-740

TOPIC TAGS: computer, analog computer, frequency analog computer, pulse frequency analog computer

ABSTRACT: The possibility of eliminating conversion devices between frequency- or pulse-frequency-type sensors and d-c-type analog computers with a view towards simplicity, reliability, and economy is explored. Block diagrams show the schemes developed for addition, subtraction, multiplication, and division. The addition and subtraction diode-resistor schemes are based on pulse-potential AND-OR gates and include triggers and blocking oscillators. The multiplication scheme permits having one multiplier in the form of a d-c signal if necessary.

Card 1/2

ACCESSION NR: AP4036520

The division scheme operates on pulse-frequency signals and delivers the quotient also in the pulse form. Four types of error inherent to these schemes are discussed. The possibility of using these schemes between the plant and digital controllers is indicated. Orig. art. has: 3 figures and 7 formulas.

ASSOCIATION: none

SUBMITTED: 07Mar63

DATE ACQ: 03Jun64

ENCL: 00

SUB CODE: DP

NO REF SOV: 007

OTHER: 000

Card 2/2

L 32907-65 ENT(1)/EED-2/PRA(h) Feb

ACCESSION NR: AP5006630

S/0146/65/008/001/0013/0018

AUTHOR: Karpov, R. G.; Shapkin, B. D.

TITLE: Electronic phase shifter 13
12
8

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 1, 1965, 13-18

TOPIC TAGS: phase shifter, electronic phase shifter

ABSTRACT: Existing electron-tube phase shifters do not lend themselves easily to cascade connection and have an undesirable variation of the output voltage with phase. A new circuit is suggested in which a double triode 6N1P tube is used; one triode operates as an amplifier feeding into an LCR load; a semiconductor diode and the other tube triode work as a cathode follower. The latter combination, controlled by an applied d-c voltage, acts as a variable resistor whose value determines the phase shift between the input and output a-c voltages. The circuit permits a theoretical phase shift of 180° in response to $0 - \infty$ resistance variation.

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L 32907-65

ACCESSION NR: AP5006630

A $140-150^\circ$ shift is reported as practically possible. An experimental model consisting of three cascade-connected phase shifters (6N9 tube, D203 diode) provided a phase shift within $0-400^\circ$ in response to a d-c voltage control within $0-10$ v. An approximately 30° -long segment of its characteristic was linear. Orig. art. has: 3 figures and 10 formulas. [03]

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut (Ryazan Radiotechnical Institute)

SUBMITTED: 02Mar64

ENCL: 00

SUB CODE: EC

NO REF SOV: 003

OTHER: 000

ATD PRESS: 3206

Card 2/2

L 17692-66 EWT(d)/EWP(1) IJP(c) GG/BB

ACC NR: AP6007818

SOURCE CODE: UR/0120/66/000/001/0106/0110

AUTHOR: Gruzdev, S. V.; Karpov, R. G.

ORG: Ryazan Electrical Engineering Institute (Ryazanskiy radiotekhnicheskiy institut) ³⁴

TITLE: Ferrite-transistor. subtracting devices for pulse-frequency signals ^B

SOURCE: Priory i tekhnika eksperimenta, no. 1, 1966, 106-110 ^{166, 44}

TOPIC TAGS: ferrite transistor circuit, computer circuit, logic circuit

ABSTRACT: Two variants of a subtracting circuit developed at the Ryazan Radio Engineering Institute are described. They are capable of producing pulse trains at the outputs with repetition frequencies equal to the difference in repetition frequencies of two signals applied at the inputs. The variant shown in Fig. 1 is used

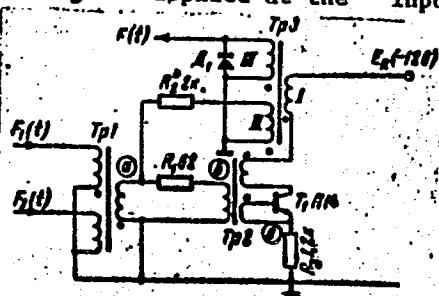


Fig. 1. Arithmetic difference circuit

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L 17692-66

ACC NR: AP6007818

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difference between two pulse repetition frequencies; i.e., the output pulse train is positive if $F_1(t) > F_2(t)$ and negative if $F_1(t) < F_2(t)$. The OR gate output gives the correct sign of the output signal. In both variants, the output is zero when $F_1(t) = F_2(t)$. The limits of operation are as follows: highest allowable pulse repetition frequency, 100—120 kc; pulse duration, 3—5 μ sec; ambient temperature, -50 to +50C; amplitude of the noise signal at the output, 5—10% of the useful signal. Test results showed that the actual and ideal number of pulses at the output never differed by more than one pulse. Orig. art. has: 4 formulas and 3 figures. [8D]

SUB CODE: 09/ SUBM DATE: 22Jan65/ ORIG REF: 002/ ATD PRESS: 4210

Card 3/3 *Jo*

L 41628-66 EWT(d)/EWT(m)/EWP(w) IJP(c) EM

ACC NR: AP6019575 (A)

SOURCE CODE: UR/0115/66/000/004/0037/0041

AUTHOR: Yarpov, R. G.

ORG: none

TITLE: Contactless converter for the measurement of torque

SOURCE: Izmeritel'naya tekhnika, no. 4, 1966, 37-41

TOPIC TAGS: angle measurement instrument, torque, torsion stress, error

ABSTRACT: The described method is based on determining the torsion angle between two ratchet wheels attached to the shaft whose torque is measured. The distance between the ratchet wheels is fixed and known. The wheels are made of magnetically soft material and serve as cores for inductive pickups whose pulsed signals are amplified and compared to determine the torsion angle. The theory of the method and the circuit elements are described. In view of the large number of factors that can influence the measurement accuracy, a careful prior calibration of the instrument is recommended. If this is done, the accuracy is potentially equal to the accuracy of the meter used to display the output of the instrument, although in practice the accuracy was lower in all cases. Orig. art. has: 4 figures and 14 formulas.

SUB CODE: 14/ SUBM DATE: 00/ ORIG REF: 004

Card 1/1

UDC: 681.2: 531.781

L 06298-67 EWT(1) CD

ACC NR: AT6015377

SOURCE CODE: UR/0006/65/000/000/0266/0279

AUTHOR: Karpov, R. G.; Oranskiy, A. M.; Fomichev, V. A.

ORG: none

TITLE: Electronic systems for the approximate differentiation of pulse repetition rate modulated signals

SOURCE: AN BSSR, Institut tekhnicheskoy kibernetiki. Vychislitel'naya tekhnika (Computer engineering). Minsk, Nauka i tekhnika, 1965, 266-279

TOPIC TAGS: digital computer, computer technology, computer input unit, digital differential analyzer, differentiating circuit, differentiation

ABSTRACT: The authors describe a system designed to perform approximate differentiation on continuous or quantized pulse trains, the pulse repetition rate being modulated to represent a controlled process. In the current differentiation schemes, the pulse train is first converted into a varying dc voltage and then differentiated by conventional means. This method introduces errors and delays. The authors propose a new system which can perform the differentiating operations directly on the basis of the digital data. A pulse train having a repetition frequency representing the first derivative of the original pulse train is expressed as

$$F(t) = k \frac{dF_1(t)}{dt}$$

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L 06298-67

ACC NR: AT6015377

where $F(t)$ is the repetition frequency of the pulse train related to the first derivative of the original pulse train $F_1(t)$, k is the dimensional coefficient. This expression can be also written as

$$F(t) = \lim_{\Delta t \rightarrow 0} \frac{F_1(t + \Delta t) - F_1(t)}{\Delta t}$$

For a pulse train, the condition $\Delta t \rightarrow 0$ has no physical meaning, hence an approximate differentiation can be used for $\Delta t \rightarrow \Delta \tau$, where $\Delta \tau$ is a small value, satisfying

$$\Delta \tau \ll T_x$$

T_x is the variation period of $F_1(t)$. Under these conditions

$$F(t)_p = \lim_{\Delta t} \frac{F_1(t + \Delta t) - F_1(t)}{\Delta t} = k \frac{\Delta F_1(t)}{\Delta t} \approx k \frac{dF_1(t)}{dt}$$

This mathematical operation can be carried out using the system shown in figure 1. In this system, the differentiation amounts to the generation of a pulse train $F(t)$ equal to the difference of the pulse train $F_1(t)$ and a new analogous pulse train $F_1(t)$ delayed by a finite time interval $\Delta \tau$ with respect to $F_1(t)$. The pulse train to be differentiated is fed into block 1 and block 3. Block one generates a fixed delay $\Delta \tau$.

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ACC NR: AT6015377

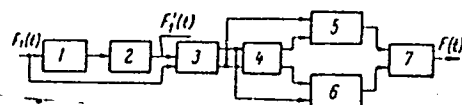


Fig. 1.

It can be in the form of a delay line for pulse trains having high repetition rates, or in the form of a magnetic drum, in which the delay is introduced by the use of two read heads displaced with respect to each other. The latter arrangement has the advantage of providing for variable adjustable delay. The output pulses of block 1 are shaped in block 2 and fed into block three, where coinciding pulses from both pulse trains are eliminated using a differential anticoincidence circuit. From here the two pulse trains minus coincidence pulses are introduced into block 4 which, in conjunction with blocks 5 and 6, has the task of generating a pulse train

$$F_1'(t) - F_1(t) \text{ if } F_1(t) > F_1'(t).$$

No output occurs if

$$F_1'(t) > F_1(t), \text{ or } F_1'(t) = F_1(t).$$

Anticoincidence techniques are used to perform this operation. Block 7 is cathode follower output stage. The authors describe and analyze two practical circuits based on the proposed approximate differentiation method. The first is suitable for continuous pulse trains in which the instantaneous pulse repetition frequency is proportional to the current state of the monitored process; the second is designed to operate on quan-

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L 06298-67

ACC NR: AT6015377

tized pulse trains in which the pulses occur in "parcels" at distinct intervals. Orig.
art. has: 5 figures.

SUB CODE: 09,12/

SUBM DATE: 15Dec65

Card 4/4 *gd*

ACC NR: AP6036271

SOURCE CODE: UR/0108/66/021/011/0069/0071

AUTHOR: Karpov, R. G.; Fomichev, V. A.

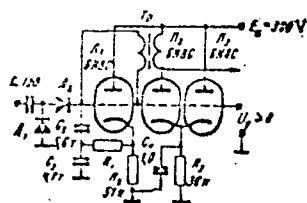
ORG: none

TITLE: Controllable frequency divider with storage-type counter

SOURCE: Radiotekhnika, v. 21, no. 11, 1966, 69-71

TOPIC TAGS: frequency divider, pulse counter

ABSTRACT: A divider is considered which turns a pulse packet of frequency $F_x(t)$ simulating a physical quantity into another pulse packet of frequency: $F_z(t) = F_x(t)/n$;



here, $n = n(t)$ is a stepwise adjustable division ratio of a storage-type counter (see figure). The circuit includes a blocking oscillator turned off by a voltage drop across R_3 . The turn-on level can be adjusted by control voltage U_y applied to the grid circuit of the cathode follower. Experimental plots of division ratio vs. control voltage are shown. Orig. art. has: 3 figures and 6 formulas.

SUB CODE: 09 / SUBM DATE: 10Dec65 / ORIG REF: 002

Card 1/1

UDC: 621.374.4

(N)

ACC NR: AM5027093

(N)

Monograph

UR/

Karpov, Remir Nikolayevich; Maslenok, Boris Arkad'yevich; Tsyganko, Oleg Leonidovich

Control drive mechanisms for nuclear power reactors on ships¹⁹ (Privody reguliruyushchikh organov sudovykh atomnykh energeticheskikh reaktorov) Leningrad, Izd-vo "Sudostroyeniye," 1965. 250 p. illus., biblio., 2000 copies printed.

TOPIC TAGS: nuclear powered ship, nuclear power technology, nuclear engineering, nuclear reactor control equipment

PURPOSE AND COVERAGE: This book is intended for engineers and technicians engaged in the design and use of nuclear reactor control drives. It may also be of use to students in schools of higher education studying marine nuclear power systems. Problems of designing control drive mechanisms for marine nuclear reactors are covered and the requirements for these devices are discussed. Existing designs are described, and recommendations for the design and choice of materials for individual units and parts are given. Methods of kinematic, reliability, and heat calculations, methods of constructing individual units, and methods and means of testing the experimental drives are covered.

Card 1/3

UDC: 621.491--52:629.12

ACC NR: AM5027093

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